

Title (en)
HOLLOW HYDROGEL CAPSULES AND METHODS OF USING THE SAME

Title (de)
HOHLE HYDROGELKAPSELN UND VERFAHREN ZUR VERWENDUNG DAVON

Title (fr)
CAPSULES D'HYDROGEL CREUSES ET LEURS PROCÉDÉS D'UTILISATION

Publication
EP 2909282 A2 20150826 (EN)

Application
EP 13864156 A 20131213

Priority
• US 201213725421 A 20121221
• US 2013074946 W 20131213

Abstract (en)
[origin: US2014174724A1] The present invention relates to hollow hydrogel capsules. In various embodiments, the present invention provides a method of treating a subterranean formation with a hollow hydrogel capsule including a hydrogel shell including a hydrolyzed and crosslinked polymerized composition. The hollow hydrogel capsule also includes a hollow interior including at least one component of a downhole composition for subterranean petroleum or water well drilling, stimulation, clean-up, production, completion, abandonment, or a combination thereof. In various embodiments, the present invention provides compositions comprising the hollow hydrogel capsules and methods of making the hollow hydrogel capsules.

IPC 8 full level
C09K 8/03 (2006.01); **B01J 13/02** (2006.01); **C08J 3/075** (2006.01)

CPC (source: EP US)
C09K 8/03 (2013.01 - EP US); **C09K 8/536** (2013.01 - EP US); **C09K 8/60** (2013.01 - US); **C09K 8/92** (2013.01 - EP US); **E21B 33/13** (2013.01 - US); **E21B 43/16** (2013.01 - EP US)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
US 10000681 B2 20180619; US 2014174724 A1 20140626; AR 094078 A1 20150708; AU 2013363284 A1 20150521; AU 2013363284 B2 20160609; BR 112015012566 A2 20170711; CA 2892055 A1 20140626; EA 028727 B1 20171229; EA 201590812 A1 20151230; EP 2909282 A2 20150826; EP 2909282 A4 20160713; MX 2015006303 A 20160205; SG 11201503535P A 20150629; US 10662361 B2 20200526; US 2018265760 A1 20180920; WO 2014099650 A2 20140626; WO 2014099650 A3 20141120

DOCDB simple family (application)
US 201213725421 A 20121221; AR P130104814 A 20131217; AU 2013363284 A 20131213; BR 112015012566 A 20131213; CA 2892055 A 20131213; EA 201590812 A 20131213; EP 13864156 A 20131213; MX 2015006303 A 20131213; SG 11201503535P A 20131213; US 2013074946 W 20131213; US 201815982591 A 20180517